AMENDMENTS TO THE CLAIMS

Claims 1-59 canceled.

60. (New) A *Helicobacter pylori* binding substance comprising a hydrophilic oligosaccharide sequence according to Formula 1

$R_1Gal\beta4GlcNAc\beta3\{(R_2Gal\beta4GlcNAc\beta6)\}_{s1}Gal\{\beta4Glc[NAc]_{s3}\}_{s4}$

wherein R1 and R2 are terminal mono-or oligosaccharides substituents so that at least one of the substituents is NeuNAcα3; s1, s3 and s4 are independently integers 0 or 1 indicating presence or absence of the structure in {} or in [];

with the provision that the oligosaccharide sequence is a free oligosaccharide or part thereof or the oligosaccharide sequence is linked to an aglycon comprising less than 23 carbon atoms;

as a non-reducing end terminal sequence, and *Helicobacter pylori* binding analogs and derivatives thereof, for use as a medicament.

61. (New) The substance according to claim 60, wherein R1 or R2, when not being NeuNAcα3, indicates terminal substituents linked to position 2 and/or 3 of the terminal Gal according to Formula 2

$Hex[NAc]_{t1}\alpha/\beta3[(DeoxyHex\alpha2)]_{t2}$

wherein Hex is Gal or Glc, integers t1 and t2 are independently 0 or 1 and α/β means that the linkage is either α or β.

62. (New) The substance according to claim 60, wherein said substance is

NeuNAcα3LacNAcβ3(NeuNAcα3LacNAcβ6)LacNAcβ3LacNAc,

NeuNAcα3LacNAcβ3(NeuNAcα3LacNAcβ3LacNAcβ6)LacNAc,

NeuNAcα3LacNAcβ3LacNAcβ3(NeuNAcα3LacNAcβ6)LacNAc,

NeuNAcα3LacNAcβ3(NeuNAcα3LacNAcβ6)LacNAcβ3Lac,

NeuNAcα3LacNAcβ3(NeuNAcα3LacNAcβ6)LacNAcβ3Gal,

NeuNAcα3LacNAcβ3(NeuNAcα3LacNAcβ6)Lac,

NeuNAcα3LacNAcβ3(NeuNAcα3LacNAcβ6)LacNAc,

NeuNAcα3LacNAcβ3(NeuNAcα3LacNAcβ6)Gal,

NeuNAcα3LacNAcβ3(NeuNAcα3LacNAcβ6)LacNAcβ3(NeuNAcα3 LacNAcβ6)LacNAc,

NeuNAcα3LacNAcβ3LacNAcβ3LacNAc,

NeuNAcα3LacNAcβ3LacNAcβ3Lac,

NeuNAcα3LacNAcβ3LacNAcβ3Gal,

NeuNAcα3LacNAcβ3LacNAc,

NeuNAcα3LacNAcβ3Lac, or

NeuNAcα3LacNAcβ3Gal

63. (New) The substance according to claim 60, wherein at least one of N-acetylactosamine residues have been replaced by type 2 N-acetyllactosamine analogous structure or structures according to Formula 3

$R_1Gal\beta4Glc[NAc]_{u1}\beta3\{(R_2Gal\beta4Glc[NAc]_{u2}\beta6)\}_{s1}Gal\{\beta4Glc[NAc]_{u3}\beta3Gal\}_{s2}\{\beta4Glc[NAc]_{s3}\}_{s4}$

wherein R1 and R2 are independently nothing or terminal mono-or oligosaccharides substituents with the proviso that at least one of the substituents is NeuNAcα3 or NeuNAcα3Galβ4Glc[NAc]$_{u4}$β3; integers s1, s2, s3 and s4 are independently 0 or 1, indicating the presence or absence of the structures in [] or in {}; integers u1, u2, u3, and u4 are independently 0 or 1 indicating the presence of absence of the N-acetyl groups in the non-reducing end terminal or midchain lactosamine residues with the proviso that at least one of the integers present is 0 and

the Glc(NAc)-units may be branched by Fucα3.

64. (New) The substance according to claim 60, wherein the oligosaccharide sequence is linked to an oligovalent or polyvalent carrier by a reduced monosaccharide residue selected from the group consisting of Glc, GlcNAc, and Gal.

65. (New) The substance according to claim 60, wherein said substance is conjugated to a polysaccharide

66. (New) The substance according to claim 60, wherein said substance is an oligomeric molecule containing at least two or three oligosaccharide chains, or said substance consists of a micelle comprising one or more of the substances as defined in claim 1 or said substance is conjugated to a carrier.

67. (New) The substance according to claim 60, wherein position C1 of reducing end terminal Gal, Glc or GlcNAc of said oligosaccharide sequence (OS) is oxygen linked (–O–) to an oligovalent or a polyvalent carrier (Z), via a spacer group (Y) and via a monosaccharide or oligosaccharide residue or derivative (X), forming the following structure

$$[OS\text{–}O\text{–}(X)_n - Y]_m - Z$$

where integers m, and n have values $m \geq 1$, and n is independently 0 or 1; X is lactosyl-, galactosyl-, poly-N-acetyl-lactosaminyl, or part of an O-glycan or an N-glycan oligosaccharide sequence, Y is a spacer group, a terminal conjugate, a ceramide lipid moiety, or a linkage to Z;

or a derivative of the substance of said structure having binding activity to *Helicobacter pylori*.

68. (New) A pharmaceutical or nutritional composition comprising a substance of claim 60 for the treatment or prophylaxis of any condition due to the presence of *Helicobacter pylori*.

69. (New) Use of the substance as defined in claim 60, for the diagnosis of a condition due to infection by *Helicobacter pylori*.

70. (New) A nutritional additive, food-stuff, food preservetive, or beverage containing the composition or substance according to claim 60.

71. (New) A method for the treatment of a condition due to presence of *Helicobacter pylori*, wherein a pharmaceutically effective amount of the substance as defined in claim 60 is administered to a subject in need of such treatment.

72. (New) The method of treatment according to claims 71, wherein said substance is a nutritional additive or a part of a nutritional composition.

73. (New) The composition or substance according to the claim 60 for binding or inhibition of *Helicobacter pylori*.

74. (New) Use of the substance as defined in claim 60 for the production of a nutritional additive or composition for the treatment or prophylaxis of any condition due to the presence of *Helicobacter pylori*.

75. (New) Use of the substance as defined in claim 60 for the identification of bacterial adhesin.

76. (New) Use of the substance as defined in claim 60 for typing *Helicobacter pylori*.

77. (New) Use of the substance as defined in claim 60 for *Helicobacter pylori* binding assays.

78. (New) A *Helicobacter pylori* binding substance comprising a sialic acid derivative as a non-reducing end terminal sequence with binding affinity towards *Helicobacter pylori* having the structure

$NeuNAc(X\text{-}R)\alpha xGal\beta 4GlcNAc\beta 3Gal(\beta 4Glc)_{pl}$

wherein x is linkage position of the sialic acid derivative and

wherein X is a linking atom or group bound to C1 of sialic acid, R is H or an organic radical comprising more than 3 carbon atoms; X is -NH forming amide structure with the carboxylic

acid group of the sialic acid residue; R is H or a C_4- C_{30} organic radical comprising a ring structure and/or an aliphatic chain; R is a C_6-C_{24} organic radical or a C6-24 aliphatic alkyl chain; integers p1 is 0 orl indicating the presence or absence of the whole structure in ( ).

79. (New) A topical, washing or cosmetic product comprising at least one of the oligosaccharide sequences defined in the claim 60 when the product is selected from the group consisting of: tooth pastes, mouth wash solutions, tablets, cleanser, disinfectant and chewing gums.

80. (New) The method for remodelling natural food material involving the following steps:

1) releasing saccharides from the material chemically or enzymatically,

2) isolating a crude oligosaccharides fraction enriched with desired saccharides which comprises poly-N-acetyllactosamines,

3) releasing the terminal monosaccharides selected from the group consisting of fucose and/or sialic acid, the release may be performed by mild acid treatment and

4) transferring an α3-linked sialic acid to oligosaccharide by a glycosyltransferase or transsialidase enzym.